

Mechanical Engineering Technology Faculty Resumes

Tombers, Paul A.

Name and academic rank

- Paul A. Tombers, Associate Professor, Mechanical Engineering Technology

Number of years of service on this faculty including, original appointment and dates of advancement

- Twenty-three years service on this faculty
- Associate Professor, 1992
- Assistant Professor, 1987
- Visiting Assistant Professor, 1986
- Hired August 1986

Degrees

- M.S.E., Purdue University, 1982
- B.S.E., Purdue University, 1974

Other related experience, i.e., teaching, industrial, etc.

- Teaching
 - Purdue University Calumet, 1979, Guest Lecturer, Thermodynamics
 - Purdue University Calumet, 1978, Guest Lecturer, Strength of Materials and Materials Science Engineering
- Industrial
 - Trailer Train Company, 1981-1986, Sr. Design Engineer/Sr. Engineer CAD
 - Tombers Construction Company, 1980-1981, Partner/General Contractor
 - Pullman Standard Company, 1975-1978, Design Analysis Engineer
 - Tombers Construction Company, 1969-1974, part-time Carpenter

Consulting, patents, etc.

- Sims Professional Engineers

States in which professionally licensed or certified, if applicable

- Registered PE, Indiana # 19956

Principal publications of the last five years

- None

Scientific and professional societies

- American Society of Mechanical Engineers

Honors and awards

- 1983, American Society of Mechanical Engineers, May 1983. Paper No. 83 – RT-2, “Dynamic Performance of Single-Axle Freight Trucks” was recognized as a

- significant contribution to the railroad industry and the paper was included in the *Journal of Engineering for Industry*, May 1983, Vol. 105.
- 1978, Pullman Incorporated. Company wide recognition for receiving United States Patent #4,068,411 for inventing a combination one piece door track bracket and light shield for boxcars.

Institutional and professional service in the last five years

- Student Advising 3 hrs/week
- MET Program Coordinator 8 hrs/week
- PNC Engineering Technology Curriculum Committee 16 hrs/year
- PNC Faculty Grievance Committee 8 hrs/year
- PNC Grade Appeals Committee 8 hrs/year
- MET Industrial Advisory Committee 12 hrs/year

Professional development activities in the last five years

- Attended one day Banner training session at PNC. Banner is new software used for almost all aspects of academic advising, grade input, scheduling, etc., 2008-09
- Attended one day welding workshop at Ivy Tech to gain additional hands on instruction in SMAW, GMAW, and OA cutting, 2008-09
- Completed six ANSYS tutorials online offered by the University of Alberta, Canada. Topics completed: Nonlinear Analysis, Nonlinear Materials, Dynamic Transient Analysis, and Modeling using Axissymmetry, Modeling springs, joints and Gaps, Using APDL (Ansys Parametric Design Language), 2007-08
- Completed eight ANSYS tutorials online offered by the University of Alberta. Topics completed: Effect of Self Weight, Distributed Loading, Buckling-Modal, Harmonic, & Transient, Dynamic Analysis, Design Optimization, Substructuring, Using P-Elements, Contact Elements, 2006-07
- Attended the National Design Engineering Show & Conference on Rosemont, IL. The purpose for the visit was to see the newest technologies in manufacturing, machining, foundry, and computer applications for design and analysis, 2005-06
- Attended an eight hour seminar covering various new features about ANSYS finite element software. The seminar was hands-on working with the software and was conducted by BELCAN CORP in Downers Grove, IL

Percentage of time available for research, scholarly activities, or professional development

- Research 0
- Scholarly Activities 0
- Professional Development 5

Percentage of time commitment to the program

- Teaching 80
- MET Program Coordinator 15

Vavrek, Edward

Name and academic rank

- Edward M. Vavrek, Associate Professor, Mechanical Engineering Technology

Number of years of service on this faculty including, original appointment and dates of advancement

- Twelve years service on this faculty
- Associate Professor of Mechanical Engineering Technology, Spring 2004
- Assistant Professor of Mechanical Engineering Technology, Fall 1998
- Visiting Assistant Professor, Fall 1997
- Hired August 1997

Degrees

- M.S.M.E., Illinois Institute of Technology, May 1998
- M.B.A., Indiana University Northwest, 1993
- B.S.M.E., Purdue University Calumet, 1987

Other related experience, i.e., teaching, industrial, etc.

- Teaching
 - Purdue University Calumet, 1995, Guest Lecturer, MET 111 - Statics and MET 211 - Applied Strength of Materials
- Industrial
 - Scheffer Inc., Merrillville, IN, 1993-1997, Engineering Manager
 - Continental Engineering and Consulting, East Chicago, IN, 1992-1993, Project Engineer
 - Scheffer Inc., Merrillville, IN, 1987-1992, Senior Project Engineer

Consulting, patents, etc.

- Johnson Hardware
- U.S. Playing Cards
- Dekker Vacuum Systems
- Vanair
- Odgen Welding
- Hess Industries
- ILF Technology
- Western Printing Machinery
- Ispat Inland Steel, Inc.

States in which professionally licensed or certified, if applicable

- None

Principal publications of the last five years

- Vavrek, Edward M., “Incorporating a Industrial Project into a MET Course”, *Proceedings for ASEE 2005 Annual Conference and Exhibition*, June 2005, Portland, Oregon.
- Vavrek, Edward M., “Incorporating a Industrial Project into a MET Course”, *Proceedings for ASEE 2004 Annual Conference and Exhibition*, June 2004, Salt Lake City, Utah

Scientific and professional societies

- American Society of Engineering Education (ASEE)
- American Society of Mechanical Engineers (ASME)

Honors and awards

- None

Institutional and professional service in the last five years

- ASME Student Section Advisor
- Student Advising in MET

Professional development activities in the last five years

- Presenter at MAMSUG Workshop, “Using SpreadSheets in Inventor”, July 2009
- Presenter at AMUG Workshop, “Parameters, Equations, and Linked/Embedded Spreadsheets used in Inventor” March 2009
- Conferences Attended:
 - November 2008, Pack Expo, Chicago IL
 - November 2007, FABTECH & AWS Welding Show, Chicago, IL
 - Sept 2007, Graph Exo, Chicago, IL
- Working with Kesling & Krocke Orthodontic Group to perform a friction study and publish results in a white paper, 2007
- Publications/Books Formally Reviewed of Last Five Years
 - Review 2 papers for ASEE Annual Conferences and Exhibition, June 2005
 - Moderated a Session @ ASEE Annual Conferences and Exhibition, June 2005
 - Review 2 papers for ASEE Annual Conferences and Exhibition, June 2004
 - Moderated a Session @ ASEE Annual Conferences and Exhibition, June 2004
- Attend ASME Student Professional Development Conference at MSOE, April 2004
- Industrial visits: Hess Industries, Ogden Welding Systems, Western Printing Machinery, ILF Technologies, EMT International, VanAir Corp, Machine Controls Tool and Die Company, Savage Brothers, TP Orthodontics, Tekkra Systems, A Packaging Systems, Dynamic Motion Controls, KTR Corp,

PizzaMatic, Dekker Vacuum, Advanced Custom Metals, Grafech LLC, LML Automated, BDI Controls, Crown ESA, Plymouth Tube, Jupiter Aluminum, Accucast Industries, Arpac Group, Scheffer inc., Milans Machinery.

Percentage of time available for research, scholarly activities, or professional development

- Research 05
- Scholarly Activities 10
- Professional Development 05

Percentage of time commitment to the program

- Teaching 80